

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F16L55/134

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
IPC 7 F16L F16K E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 467 835 A (CHAMPLEBOUX JACQUES) 28 August 1984 (1984-08-28) the whole document	1-6
A	US 5 778 982 A (BASKI HENRY A ET AL) 14 July 1998 (1998-07-14) column 13, line 28 - line 36; figures	1,2
A	US 5 702 109 A (BLIN PHILIPPE ET AL) 30 December 1997 (1997-12-30) abstract; figures	1,2
A	GB 2 275 066 A (XL TECHNOLOGY LIMITED) 17 August 1994 (1994-08-17) figures	1,2

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

21 September 2004

Date of mailing of the international search report

29/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Mauriès, L

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP2004/006240

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4467835	A	28-08-1984	FR 2506893 A1 CA 1177762 A1 GB 2099541 A , B IT 1156021 B NL 8202108 A , B ,	03-12-1982 13-11-1984 08-12-1982 28-01-1987 16-12-1982
US 5778982	A	14-07-1998	NONE	
US 5702109	A	30-12-1997	FR 2706575 A1 CA 2164336 A1 DE 69410461 D1 EP 0702747 A1 WO 9500738 A1 NO 955121 A	23-12-1994 05-01-1995 25-06-1998 27-03-1996 05-01-1995 15-02-1996
GB 2275066	A	17-08-1994	NONE	